AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application.

1-17. (Cancelled)

18. (Currently amended) A method for controlled release of therapeutic or diagnostic agents comprising administering to tissue in need thereof a biocompatible, polymerizable, macromer composition comprising at least one NO carrying region or NO modulating compound, wherein NO or the NO modulating compound is complexed to the macromer composition, and wherein the NO or the NO modulating compound is released from the macromer composition following polymerization *in situ*, under physiological conditions, wherein the macromer composition comprises one or more region ~~regions~~ selected from the group consisting of water soluble regions, tissue adhesive regions, and polymerizable end group regions and one or more therapeutic or diagnostic agents selected from the group consisting of proteins, carbohydrates, nucleic acids, organic molecules, inorganic molecules, biologically active molecules, cells, tissue, and tissue aggregates~~, and diagnostic agents~~.

19. (Cancelled)

20. (Previously presented) A method of treating a disorder or condition with NO comprising administering to an individual in need thereof a biocompatible, polymerizable, macromer composition comprising at least one NO carrying region or NO modulating compound, wherein NO or the NO modulating compound is complexed to the macromer composition, and wherein the NO or the NO modulating compound is released from the macromer composition following polymerization *in situ*, under physiological conditions, wherein the macromer composition comprises regions selected from the group consisting of water soluble regions, tissue adhesive regions, and polymerizable end group regions.

21. (Previously presented) The method of claim 20 wherein the macromer further comprises degradable regions.

22. (Currently amended) The method of claim 20 for treatment of a disorder or condition affected by NO selected from the group consisting of wound healing, restenosis, thrombosis, asthma, arthritis, and erectile dysfunction.

23. (Currently amended) The method of claim 20 wherein the macromer is adhered to tissue to ~~prevent~~ reduce formation of surgical adhesions, to form a tissue junction, to provide support for the tissue or to coat the tissue.

24. (Currently amended) The method of claim 22 wherein restenosis occurs after ~~stint~~ stent deployment.

25-31. (Cancelled)

32. (New) The method of claim 18 wherein the macromer composition is water soluble.

33. (New) The method of claim 18, wherein the macromer comprises a water soluble region, an NO carrying region, a cell adhesion ligand, and a free radical polymerizable region.

34. (New) The method of claim 18, wherein the water soluble region is polyvinyl alcohol and the polymerizable group is an acrylamide.

35. (New) The method of claim 18, wherein the macromer composition comprises an acryloyl-PEG-Cys-NO macromer.

36. (New) The method of claim 18, wherein the macromer composition comprises an acryloyl-PEG-Lys_5-NO macromer.

37. (New) The method of claim 18, wherein the macromer composition comprises a PEG-DETA-NO macromer.

38. (New) The method of claim 18, wherein the macromer composition comprises a PVA-NH_2-NO macromer.

39. (New) The method of claim 18, wherein the macromer composition comprises a PVA-Cys-NO macromer.

40. (New) The method of claim 18, wherein the macromer composition comprises a PVA-NO-βFGF macromer.

41. (New) The method of claim 18, wherein the macromer composition is administered to a smooth muscle cell tissue.

42. (New) The method of claim 18, wherein the macromer composition is administered to blood.

43. (New) The method of claim 18, wherein the macromer composition further comprises at least one degradable region.

44 (New) The method of claim 43, wherein the degradable region is attached to a water soluble region, and a polymerizable end group region is attached to the degradable region.

45. (New) The method of claim 43, wherein a water soluble region is attached to the degradable region, and the polymerizable end group region is attached to the water soluble region.

46. (New) The method of claim 18, further comprising initiating polymerization *in situ.*